

METHODS AND APPARATUS FOR REDUCING GAS TURBINE ENGINE EMISSIONS

ABSTRACT OF THE DISCLOSURE

A gas turbine engine includes a combustor system including a lean premix combustor and a water delivery system. The combustor is operable with a fuel/air mixture equivalence ratio less than one and the water delivery system is configured to supply at least one of water or steam to the gas turbine engine such that either the water or the steam is injected into the combustor to control emissions generated by the combustor. As a result, nitrous oxide emissions for specified turbine operating power levels are lowered.